Name: Davison, Peter
Education Institution: Princeton University
Major/Degree/Grad Year: Mechanical and Aerospace Engineering / BSE 2012
NASA Academy Mentor: Marty Kress
Project Mentor: Andy Crocker / Dynetics, Inc.
Org Code/Branch: Dynetics, Inc. / Space Division

Research and Experience

- **Junior Independent Work – *Princeton University (2011)***
  "Spacecraft Attitude Determination via Recursive Direction Cosine Matrix Estimation"
  - **Researched, developed and simulated a novel recursive attitude estimation technique that uses a constrained optimization algorithm to estimate DCM elements**
- **Mechanical & Aerospace Engineering Research Assistant – *Princeton University (2010)***
  High Contrast Imaging Laboratory
  - **Worked as part of Princeton's team investigating direct imaging of extra-solar planets for the NASA Terrestrial Planet Finder (TPF) mission using a coronagraph and MEMS deformable mirrors for wavefront control**
- **Microsatellite Team Design Project – *Princeton University (2010)***
  - **As part of a space systems design course developed a concept microsatellite design for a Technology Demonstration Mission for coronagraph and deformable mirror hardware.**
  - **Project design presented to *Team X* at NASA JPL.**

Membership and Activities

- **Member, AIAA: 2009 – Present**
- **Princeton University Men's Rugby Club**
  - **Co-Captain: Spring, 2011 – Present**
  - **President: Fall, 2010 – Present**
- **Eagle Scout: Boy Scouts of America**
  - **March, 2005 – Present**

Honors and Awards

- **AIAA Foundation Ellis F. Hitt Digital Avionics Scholarship (2011)**
- **Raytheon Scholars Program (2009-2011)**

Title of Poster: Rocket City Space Pioneers: X Prize Test Bed

Abstract:

The Rocket City Space Pioneers is a team of companies formed with the goal of sending a robotic lander to the moon and deploying a rover to traverse the lunar surface to compete for the Google Lunar X Prize. We have designed an X Prize Test Bed to test the technologies used on the lunar lander design and verify the integration of the subsystems. The modular test bed provides long-duration flight in a lunar gravity-simulated environment with three degrees of freedom while introducing minimal external force. The primary subsystems to be tested include propulsion, GNC, and structures, as well as subsystem integration.